

CLAIMS

1. A method comprising:

receiving a data stream comprising timestamp information into a buffer, wherein the
5 received data stream includes gaps; and

generating an equalized reference clock from the received data stream by removing the
gaps to facilitate equalized processing of the timestamp information received in a non-equalized
data stream.

10 2. A method according to claim 1, further comprising:

utilizing the equalized reference clock to enable equalized reads of the received data
stream from the buffer.

15 3. A method according to claim 2, further comprising:

generating a local timebase from the timestamp information to synchronize the local
timebase with a remote network element transmitting the received data stream.

4. A method according to claim 3, wherein the remote network element is a cable modem
termination system (CMTS), and the received data stream is an Moving Picture Experts Group
20 (MPEG) compliant data stream.

5. A method according to claim 1, wherein generating the equalized reference clock
comprises:

generating an error value representing a difference in writes to and reads from the buffer;
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driving a numerically controlled oscillator (NCO) based, at least in part, on the generated error value.

6. A method according to claim 5, wherein the error value resolves to an average clock frequency of the non-equalized input data stream.

7. A method according to claim 5, wherein the output of the NCO enables reads from the buffer.

8. A method according to claim 5, wherein the output of the NCO is represented in the generated error value.

9. A method according to claim 8, wherein the output of the NCO is represented in the generated error value as enabling reads from the buffer.

10. A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing computing device, implements a synchronization agent to receive a data stream comprising timestamp information into a buffer, wherein the received data stream includes gaps, and to generate an equalized reference clock from the received data stream by removing the gaps to facilitate equalized processing of the timestamp information received in a non-equalized data stream from the buffer.

11. A machine accessible storage medium according to claim 10, further comprising instructions which, when executed, cause the accessing machine to utilize the generated reference clock to enable equalized reads of the received data stream from the buffer.

12. A machine accessible storage medium according to claim 11, further comprising instructions which, when executed, cause the accessing machine to generate a local timebase from the timestamp information to synchronize the local timebase with a remote network element transmitting the received data stream.

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13. A machine accessible storage medium according to claim 10, wherein the instructions to generate an equalized reference clock include instructions to maintain a count of each of a number of writes to and reads from the buffer, and to generate a differential error value representing the difference in the number of reads and writes, wherein the differential error value is utilized to drive a numerically controlled oscillator (NCO) which generates the equalized reference clock.

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14. A machine accessible storage medium according to claim 13, wherein the generated equalized reference clock resolves to approximately an average frequency of the received data stream.

15. An apparatus comprising:

a buffer to receive a data stream including timestamp information, the received data stream including gaps;

one or more counters, coupled to the buffer, to maintain a count of a number of respective writes to and reads from the buffer; and

a numerically controlled oscillator (NCO), coupled to the counters and the buffer, to periodically receive an indication representing a differential error value from the one or more counters and to generate an equalized reference clock which resolves to an average frequency of the input data stream.

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16. An apparatus according to claim 15 further comprising:

a summing module, coupled between the one or more counters and the NCO, to receive a count reflective of the writes to and reads from the buffer and to generate a differential error value therefrom which is periodically sampled by the NCO, from which the equalized reference clock is generated.

17. An apparatus according to claim 15, wherein the NCO is comprised of:

one or more accumulators, to periodically accumulate the differential error value from the one or more counters and generate a signal representation therefrom.

18. An apparatus according to claim 17, further comprising:

an edge detector, coupled to the NCO, to receive the generated signal representation of the differential error value and, when the signal exceeds a threshold, generate a read enable.

19. An apparatus according to claim 18, wherein the read enable represents the equalized reference clock.

20. An apparatus according to claim 19, wherein the differential error value reflects feedback from the NCO as the number of reads from the buffer.